

PXE-007.US  
Serial No 09/464,795

with -- " cells' " --.

On page 36, line 5, please delete "factor=s", replace with -- "factors' " --.

On page 46, line 19, please delete "Aknock-out@" and replace with -- "knock-out" --.

On page 47, line 20, please delete "Asubtractive hybridization@" and replace with -- "subtractive hybridization" --.

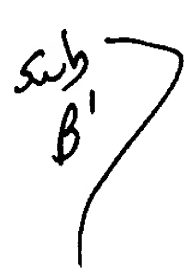
On page 59, line 22, please delete "5=", replace with -- "5' " --.

On page 62, line 24, please delete "ATK@" and replace with -- "TK" --.


On page 63, line 25, please delete "Atargeting@" and replace with -- "targeting" --.

#### IN THE CLAIMS

Please amend claims 38 and 39, and cancel claims 1-37 and 51-64, without prejudice or disclaimer, also, please add new claims 65-79 as follows:

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38. (Amended) A transgenic, non-human animal comprising a panel of expression cassettes, said panel comprising  
a first expression cassette comprising a first control element derived from a first stress-inducible gene, said control element operable linked to sequences encoding a first light generating polypeptide, and  
a second expression cassette comprising a second control element derived from a second stress-inducible gene, said second control element operable linked to sequences encoding

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a second light generating polypeptide,

[of claim 1,] wherein said expression cassettes have been introduced into said animal or an ancestor of said animal, at an embryonic stage.

39. (Amended) A cohort of transgenic, non-human animals comprising a panel of expression cassettes, said panel comprising

a first expression cassette comprising a first control element derived from a first stress-inducible gene, said control element operable linked to sequences encoding a first light generating polypeptide, and

a second expression cassette comprising a second control element derived from a second stress-inducible gene, said second control element operable linked to sequences encoding a second light generating polypeptide,

[of claim 1,] wherein (i) each transgenic animal of the cohort contains at least one expression cassette of the panel, and (ii) the transgenic animals comprising the cohort are substantially isogenic relative to each other.

--65. The transgenic animal of claim 38, said panel further comprising

a third expression cassette comprising a control element derived from a third stress-inducible gene, said third control element operable linked to sequences encoding a third light generating polypeptide.

66. The transgenic animal of claim 65, wherein (i) said first, second, and third control elements are each derived

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from a different gene, and (ii) said first, second, and third light generating polypeptides produce the same color of light.

67. The transgenic animal of claim 65, wherein (i) said first, second, and third control elements are each derived from a different gene, and (ii) at least two of said first, second, and third light generating polypeptides produce different colors of light.

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68. The transgenic animal of claim 65, said panel further comprising additional expression cassettes, wherein each expression cassette comprises a control element derived from a different stress-inducible gene, said control element operable linked to sequences encoding a light generating polypeptide.

69. The cohort of transgenic animals of claim 39, said panel further comprising

a third expression cassette comprising a control element derived from a third stress-inducible gene, said third control element operable linked to sequences encoding a third light generating polypeptide.

70. The cohort of transgenic animals of claim 69, wherein (i) said first, second, and third control elements are each derived from a different gene, and (ii) said first, second, and third light generating polypeptides produce the same color of light.

71. The cohort of transgenic animals of claim 69, wherein (i) said first, second, and third control elements are each derived from a different gene, and (ii) at least two of said first, second, and third light generating polypeptides produce different colors of light.

72. The cohort of transgenic animals of claim 69, said panel further comprising additional expression cassettes, wherein each expression cassette comprises a control element derived from a different stress-inducible gene, said control element operable linked to sequences encoding a light generating polypeptide.

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73. A method of evaluating the potential toxicological effects of an analyte in a living transgenic non-human animal, said method comprising

administering the analyte to a living transgenic non-human animal, said animal comprising an expression cassette, said expression cassette comprising control elements derived from an HO gene operably linked to sequences encoding a light generating protein, wherein administering of said analyte is carried out under conditions that permit light generation mediated by said light generating polypeptide in the transgenic animal when said polypeptide is expressed,

determining the effect of the analyte on expression of the light generating polypeptide in a living animal wherein said expression is mediated by said HO control elements, and

evaluating the potential toxicological effects of the analyte by associating potential toxicity with an increase in

the expression of the light generating polypeptide in the presence of the analyte.

74. The method of claim 73, wherein said conditions that permit light generation mediated by the light generating polypeptide includes administering, to the animal, at least one substrate for the light generating polypeptide.

75. A transgenic, non-human animal comprising an expression cassette, said expression cassette comprising control elements derived from an HO gene operably linked to sequences encoding a light generating protein, wherein said expression cassette has been introduced into said animal or an ancestor of said animal, at an embryonic stage.

76. The transgenic animal of claim 75, wherein said control elements are derived from a mouse HO gene.

77. A noninvasive method for detecting a level expression in response to an analyte, wherein said expression is (i) mediated by selected control elements, and (ii) in a non-human living animal, said method comprising

(a) administering the analyte to the transgenic animal of claim 75, wherein administering of said analyte is carried out under conditions that permit light generation mediated by said light generating polypeptide,

(b) placing the animal within a detection field of a photo detector device,

(c) maintaining the animal in the detection field of the device, and